

# Homeland Security Research and Development: Homeland Security Issues in the 116<sup>th</sup> Congress

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## Homeland Security Issues in the 116<sup>th</sup> Congress

This Insight is part of the *Homeland Security Issues in the 116<sup>th</sup> Congress* series, assembled to provide an introduction a broad range of issues that may come before Congress. For CRS's congressional clients, *Selected Homeland Security Issues in the 116<sup>th</sup> Congress: CRS Experts* contains a list of these Insights and CRS homeland security experts.

## Overview

In the Department of Homeland Security (DHS), the [Directorate of Science and Technology](#) (S&T) has primary responsibility for establishing, administering, and coordinating research and development (R&D) activities. The [Countering Weapons of Mass Destruction Office](#) (CWMDO) is responsible for R&D relating to detection of nuclear and radiological threats. Several other DHS components, such as the Coast Guard, also fund R&D and R&D-related activities associated with their missions. The Common Appropriations Structure that DHS introduced in its FY2017 budget includes an account titled Research and Development in seven different DHS components. Issues for DHS R&D in the 116<sup>th</sup> Congress may include coordination, organization, and impact.

## Coordination of R&D

The Under Secretary for S&T, who leads the S&T Directorate, has statutory responsibility for coordinating homeland security R&D both within DHS and across the federal government ([6 U.S.C. §182](#)). The CWMDO also has an interagency coordination role with respect to nuclear detection R&D ([6 U.S.C. §592](#)). Both internal and external coordination are long-standing congressional interests.

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Regarding internal coordination, the Government Accountability Office (GAO) concluded in a 2012 [report](#) that because so many components of the department are involved, it is difficult for DHS to oversee R&D department-wide. In January 2014, the [joint explanatory statement](#) for the Consolidated Appropriations Act, 2014 (P.L. 113-76) directed DHS to implement and report on new policies for R&D prioritization. It also directed DHS to review and implement policies and guidance for defining and overseeing R&D department-wide. In July 2014, GAO [reported](#) that DHS had updated its guidance to include a definition of R&D and was conducting R&D portfolio reviews across the department, but that it had not yet developed policy guidance for DHS-wide R&D oversight, coordination, and tracking. In December 2015, the [joint explanatory statement](#) for the Consolidated Appropriations Act, 2016 (P.L. 114-113) stated that DHS “lacks a mechanism for capturing and understanding research and development (R&D) activities conducted across DHS, as well as coordinating R&D to reflect departmental priorities.” In March 2019, GAO [reported](#) that the S&T Directorate had “strengthened its R&D coordination efforts across DHS, but some challenges remain,” including that not all DHS components participate fully in the coordination mechanism that S&T has established. In September 2019, the DHS Office of Inspector General [found](#) that the S&T Directorate was still not effectively coordinating and integrating DHS-wide R&D, and the Senate Committee on Appropriations [recommended](#) that “S&T should be the central component for departmental R&D, including R&D for other components. Ensuring that S&T is the principal R&D component will contribute to the goal of Departmental unity of effort.”

A challenge for external coordination is that the majority of homeland security-related R&D is conducted by other agencies, most notably the Department of Defense and the Department of Health and Human Services. The [Homeland Security Act of 2002](#) directs the Under Secretary for S&T, “in consultation with other appropriate executive agencies,” to develop a government-wide national policy and strategic plan for homeland security R&D ([6 U.S.C. §182](#)), but no such plan has ever been issued. Instead, the S&T Directorate has developed R&D plans with selected individual agencies, and the [National Science and Technology Council](#) (a coordinating entity in the Executive Office of the President) has issued government-wide R&D strategies in selected topical areas, such as [biosurveillance](#).

## Organization for R&D

DHS has reorganized its R&D-related activities several times. It established CWMDO in December 2017, consolidating the former [Domestic Nuclear Detection Office](#) (DNDO), most functions of the former Office of Health Affairs (OHA), and some other elements. DNDO and OHA were themselves both created, more than a decade ago, largely by reorganizing elements of the S&T Directorate. The Countering Weapons of Mass Destruction Act of 2018 (P.L. 115-387) expressly authorized the establishment and activities of CWMDO. The 116<sup>th</sup> Congress may examine the implementation of that act.

The organization of DHS laboratory facilities may also be a focus of attention in the 116<sup>th</sup> Congress. At its establishment, the S&T Directorate acquired laboratories from other departments, including the [Plum Island Animal Disease Center](#) (from the Department of Agriculture, USDA) and the [National Urban Security Technology Laboratory](#), then known as the Environmental Measurements Laboratory (from the Department of Energy). It subsequently absorbed some laboratory facilities from other DHS components (such as the [Transportation Security Laboratory](#) from the Transportation Security Administration), but other DHS components retained their own laboratories (such as the U.S. Coast Guard [Research and Development Center](#)). During the 115<sup>th</sup> Congress, the Federal Bureau of Investigation agreed to assume some of the operational costs of the S&T Directorate's [National Biodefense Analysis and Countermeasures Center](#), and DHS proposed to transfer operational responsibility for the [National Bio and Agro-Defense Facility](#) (NBAF)—a biocontainment laboratory currently being built by the S&T Directorate in Manhattan, Kansas—to USDA. In June 2019, DHS and USDA signed a [memorandum of agreement](#) outlining their plans for the NBAF transfer, and USDA released a [strategic vision](#) for the future of the facility.

## Impact of R&D Results

In [testimony](#) at a Senate hearing in 2018, the Administration's nominee to be Under Secretary for S&T described the S&T Directorate's mission as "to deliver results" and referred to "timely delivery and solid return on investment." Members of Congress and other stakeholders have sometimes questioned the impact of DHS R&D programs and whether enough of their results are ultimately implemented in products actually used in the U.S. homeland security enterprise. Part of the debate has been about finding the right balance between near-term and long-term goals. In [testimony](#) at House hearing in 2017, a former Under Secretary for S&T stated that the directorate "has worked hard to focus on being highly relevant—shifting from the past focus on long-term basic research to near-term operational impact." Yet [testimony](#) from an industry witness at the same House hearing stated that "there is a perception among some in the industry that S&T programs only infrequently significantly impact the operational or procurement activities of the DHS components." The 116<sup>th</sup> Congress may continue to examine the effectiveness and impact of DHS R&D.

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